

REMARKS/ARGUMENTS

Claims 22 – 29 have been rejected under 35 U.S.C. Section 103(a) as unpatentable over Vassallo, U.S. Patent No. 6,157,194 in view of Li, et al., U.S. Patent No. 5,602,934. In response, claim 22 has been amended. Reconsideration of the claims in view of this amendment and the following remarks is respectfully requested.

Vassallo discloses a personal computer-based control system for an MRI scanner. The system is designed to allow different types of MRI scanners to be controlled by a single system and further to reduce the cost of MRI systems by “exploiting the economics of scale implicit in the PC market”. To further this goal, the system is based on industry standard software execution, and particularly on industry standard application program interfaces (API).

Claim 22, as amended, requires a pulse sequence server that includes a program for converting the pulse description and the sequence description to hardware-dependent programs. Such programs are discussed, for example, on page 8 of the application as filed. The purposes of the program for converting the software to hardware-dependent programs is to improve speed during real-time operation.

Neither of the cited references discloses providing an object oriented graphical application interface on a workstation for producing pulse and sequence descriptions, downloading the descriptions to a server, and then translating the programs into hardware-specific programs for use in real-time. Li does not teach a graphical interface at all. Vassallo teaches a pc-based system which interfaces directly to the magnet, RF, and patient handling subsystems using industry-standard protocols.

Rather than suggesting the use of a separate server or of a translation program for translating the software into hardware-specific programs, Vassallo teaches away from such a system.

New claim 30 depends from claim 22, and further clarifies that the object oriented graphical application development system is a JAVA-based system, and the hardware-dependent programs are C-based programs. None of the cited references discloses a translator for converting a JAVA-based pulse sequence into a C-based hardware-specific program. New claim 31 further specifies that the C-based program is a C++ program. None of the cited references teach or suggest this distinction either.

In view of the amendments, therefore, claims 22 – 31 are believed to be in condition for allowance, and the Applicants respectfully request that a notice of allowance for these claims be issued.

No fees are believed necessary to enter this response. However, if any fees are believed necessary, please charge Deposit Account 07-0845.

Respectfully submitted,

Josef P. Debbins

By: 

Terri S. Flynn
Quarles & Brady LLP
Reg. No. 41,756
Attorney for Applicant
411 East Wisconsin Avenue
Milwaukee, WI 53202-4497
414/277-5229